Amendments to the Specification

Please replace paragraph [0011] with the following amended paragraph:

[0011] Figs. ~~6a-l~~ 6a-j show a composition modulation table: Niobium concentration, soft local modes and mean field calculation as a result of varying parameters A and λ, as defined hereinafter. In Figs. 6**a**, 6**e**,and 6**i**, modulation is by a sine wave with A=0.25 and λ=12a. In Figs. 6**b**, 6**f**, and 6**j**, modulation is by a sawtooth wave with A=0.25 and λ=12a. In Figs. 6**c**, and 6**g**~~, and 6k~~, modulation is by a sine wave with A=0.5 and λ=12a. In Figs. 6**d**, and 6**h**~~, and 6l~~, modulation is by a sawtooth wave with A=0.25 and λ=4a.

Please replace paragraph [0037] with the following amended paragraph:

[0037] Analyzing the role of the composition modulation from the perspective of electrostatics proves to be a valuable exercise as it leads to understanding the effects of different forms and parameters of the composition modulation. Figs. ~~6a-l~~ 6a-j comprise a table including: a picture of various composition modulation schemes, the cartesian coordinates of the local modes by plane according to the above given modulation, and the calculated electric field for each modulation, $\varepsilon_{CM}(k)$ of Eq. 10, all indexed by plane, k. The defining parameters include the amplitude and the wavelength of modulation. The first modulation, as in Fig. 6**a**, is given by a sinusoidal function with an amplitude of A = 0.25, half the maximum possible fluctuation

amplitude. The wavelength λ = 12a ensures the modulation covers twelve planes through one undulation. The Niobium concentration begins at 50%, becomes sparse, then increases and returns to 50% again, in a sinusoidal fashion. Scandium concentration has a similar behavior but phase shifted by π. The resulting local modes averaged over the supercell are presented below in Fig. 6**e**. u_x, u_y and u_z, the average local modes over the supercell, are given by horizontal lines. The average local mode vectors are all equal, as they are in the disordered structure, and the overall electrical polarization then lies in the [111] direction. $u_x(k)$ and $u_y(k)$ are equal within statistical uncertainty, and fluctuate very little by plane. $u_z(k)$ sinusoidally varies around its average value u_z as a function of k. As a result, the polarization is rotating locally with the fluctuation of $u_z(k)$. With increasing k, from 1 to 4, the polarization rotates from an intermediate direction between [001] and [111] towards the [111] direction. Then when k = 4, a value where there is no difference in the composition in the planes above, k+1, and below, k-1, the polarization is that of the disordered and average structure, in the [111] direction. As k increases further, from 5 to 10, the polarization begins to rotate from the [111] direction toward the [110] direction as $u_z(k)$ becomes suppressed. Then to complete the picture, for k values 11 and 12, $u_z(k)$ begins to rise again and the polarization rotates through [111] towards the [001] direction. This rotation of the electrical polarization is quickly corroborated in the theoretical calculation of the local electric field, also dependent on plane index k (Fig. 6**i**). This is the $\varepsilon_{CM}(k)$ given by Eq. 8. Associated with the composition modulation is this $\varepsilon_{CM}(k)$, an internal electric field capable of rotating the local polarization from that of the mean structure. More

precisely, a value of $\varepsilon_{CM}(k) > 0$ yields local mode $u_z(k) > u_z$. Likewise if $\varepsilon_{CM}(k) < 0$, local mode $u_z(k) < u_z$.